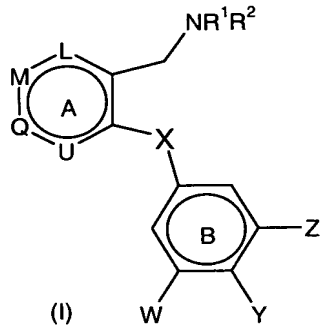
Claims

1. A compound of formula (I) or pharmaceutically acceptable salts, solvates or polymorphs thereof;



(I)

wherein;

X is S or CH_2;

L and U, which may be the same or different, are -N-, $-N^+(-O^-)-$ or -C(H)-;

M and Q, which may be the same or different, are -N-, $-N^+(-O^-)-$ or $-C(R^4)-$;

wherein ring A contains 1 or 2 nitrogen atoms, and wherein when L, U, M or Q is $-N^+(-O^-)-$, ring A contains no other nitrogen atom;

R^1 and R^2, which may be the same or different, are hydrogen, C_1-C_6alkyl, $(CH_2)_m(C_3$-C_6cycloalkyl) wherein m = 0, 1, 2 or 3, or R^1 and R^2 together with the nitrogen to which they are attached form an azetidine ring;

W, Y and Z, which may be the same or different, are hydrogen, halogen, C_1-C_6alkyl, CF_3, OCF_3, C_1-C_4alkylthio or C_1-C_4alkoxy; or Y and Z are linked so that, together with the interconnecting atoms, Y and Z form a fused 5 to 7-membered carbocyclic or heterocyclic ring which may be saturated, unsaturated or aromatic, and wherein when Y and Z form a heterocyclic ring, in addition to carbon atoms, the linkage contains one or two heteroatoms independently selected from oxygen, sulfur and nitrogen; and wherein W, Y and Z are not all hydrogen;

and

each R^4 is independently:

$-(CH_2)_p-R^5$;

where p is 0, 1 or 2;

R^5 is hydrogen, $CONR^6R^7$, $SO_2NR^6R^7$, $SO_2NHC(=O)R^6$, hydroxy, C_1-C_4alkoxy, $NR^8SO_2R^9$, NO_2, NR^6R^{11}, CN, CO_2R^{10}, SR^{10}, $S(O)R^9$ or SO_2R^{10}; R^6, R^7, R^8 and R^{10} which may be the same or different, are hydrogen or C_1-C_6alkyl optionally substituted independently by one or more R^{12}; R^9 is C_1-C_6 alkyl optionally substituted independently by one or more R^{12}; R^{11} is hydrogen, C_1-C_6 alkyl optionally substituted independently by one or more R^{12}, $C(O)R^6$, CO_2R^9, $C(O)NHR^6$ or $SO_2NR^6R^7$; R^{12} is fluoro, hydroxy, CO_2H, C_3-C_6cycloalkyl, NH_2, $CONH_2$, C_1-C_6alkoxy, C_1-C_6alkoxycarbonyl or a 5- or 6-membered heterocyclic ring containing 1, 2 or 3 heteroatoms selected from N, S and O optionally substituted independently by one or more R^{13}; or R^6 and R^7, together with the nitrogen to which they are attached, form a 4-, 5- or 6-membered heterocyclic ring optionally substituted independently by one or more R^{13}; or

a 5- or 6-membered heterocyclic ring containing 1, 2 or 3 heteroatoms selected from N, S and O, optionally substituted independently by one or more R^{13};

wherein R^{13} is hydroxy, C_1-C_4alkoxy, fluoro, C_1-C_6alkyl, haloalkyl, haloalkoxy, $-NH_2$, $-NH(C_1$-C_6alkyl) or $-N(C_1$-C_6alkyl$)_2$; or

when both M and Q are CR^4, the R^4 groups are linked so that together with the interconnecting atoms, the R^4 groups form a fused 5- to 7-membered carbocyclic or heterocyclic ring which may be saturated, unsaturated or aromatic.

2. A compound according to claim 1 wherein L and U are -CH-.

3. A compound according to any preceding claim wherein W, Y and Z are each independently selected from hydrogen, methyl, ethyl, CF_3, OCF_3, C_1-C_4alkylthio, methoxy, ethoxy, chloro, fluoro and bromo.

4. A compound according to claim 3 wherein W and Z are hydrogen.

5. A compound according to any preceding claim wherein Y is methylthio.

6. A compound according to any preceding claim wherein M and Q are each independently selected from -N- and -CH-.

7. A compound according to any preceding claim wherein R^1 and R^2 are each independently selected from hydrogen and C_1-C_6alkyl.

8. A compound according to claim 6 wherein R^1 is methyl and R^2 is hydrogen or methyl.

9. A compound according to claim 1 wherein the compound is selected from:

N-methyl-*N*-[(4-{[4-(methylsulfanyl)phenyl]sulfanyl}-3-pyridinyl)methyl]amine,
N,N-dimethyl-*N*-[(4-{[4-(methylsulfanyl)phenyl]sulfanyl}-3-pyridinyl)methyl]amine,
N-methyl-*N*-[(3-{[4-(methylsulfanyl)phenyl]sulfanyl}-4-pyridinyl)methyl]amine,
N,N-dimethyl-*N*-[(3-{[4-(methylsulfanyl)phenyl]sulfanyl}-4-pyridinyl)methyl]amine,
N-methyl-*N*-({3-[4-(methylsulfanyl)benzyl]-4-pyridinyl}methyl)amine,
N,N-dimethyl-*N*-({3-[4-(methylsulfanyl)benzyl]-4-pyridinyl}methyl)amine,
N-methyl-*N*-({4-[4-(methylsulfanyl)benzyl]-3-pyridinyl}methyl)amine, and
N,N-dimethyl-*N*-({4-[4-(methylsulfanyl)benzyl]-3-pyridinyl}methyl)amine,
or pharmaceutically acceptable salts, solvates or polymorphs thereof.

10. A composition comprising a compound of formula (I) as claimed in any one of the preceeding claims, or pharmaceutically acceptable salts, solvates or polymorphs thereof, and a pharmaceutically acceptable diluent or carrier.

11. A compound of formula (I) as claimed in any one of the preceeding claims, or pharmaceutically acceptable salts, solvates or polymorphs thereof, for use as a medicament.

12. The use of a compound of formula (I) as claimed in any one of the preceeding claims, or pharmaceutically acceptable salts, solvates or polymorphs thereof, in the preparation of a medicament for the treatment or prevention of a disorder in which the regulation of monoamine transporter function is implicated.

13. Use according to claim 12 wherein the disorder is selected from hypertension, depression, generalized anxiety disorder, phobias, post-traumatic stress syndrome, avoidant personality disorder, sexual dysfunction (including premature ejaculation and male impotence), eating disorders, obesity, substance abuse disorders (including chemical dependencies), cluster headache, migraine, pain, Alzheimer's disease, obsessive-compulsive disorder, panic disorder, memory disorders, Parkinson's diseases, endocrine disorders, vasospasm, cerebellar ataxia, gastrointestinal tract disorders, negative symptoms of schizophrenia, premenstrual syndrome, fibromyalgia syndrome, stress incontinence, Tourette's syndrome, trichotillomania, kleptomania, attention deficit hyperactivity disorder (ADHD), chronic paroxysmal hemicrania, headache (associated with vascular disorders), emotional lability, pathological crying, sleeping disorder (cataplexy) and shock.

14. Use according to claim 13 wherein the disorder is selected from depression, attention deficit hyperactivity disorder, obsessive-compulsive disorder, post-traumatic stress syndrome, substance abuse disorders and sexual dysfunction (including premature ejaculation and male impotence).

15. Use according to claim 14 wherein the disorder is premature ejaculation.